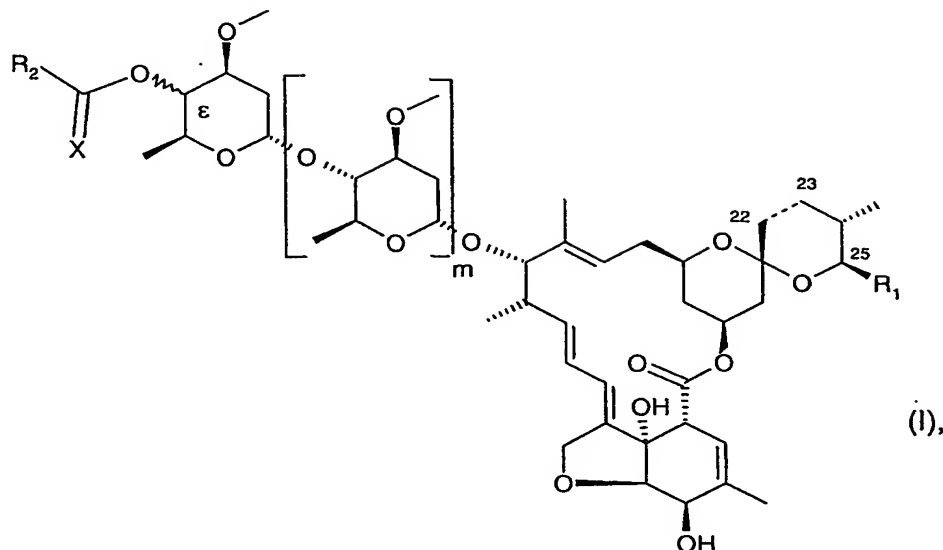


CLAIMS

1. A compound of the formula



5 wherein the bond between carbon atoms 22 and 23 is a single or double bond;

m is 0 or 1;

R₁ is C₁-C₁₂alkyl, C₃-C₈cycloalkyl or C₂-C₁₂alkenyl; and either

(A) R₂ is -N(R₃)R₄, and

(1) X is O, wherein

10 R₃ is hydrogen, unsubstituted or mono- to pentasubstituted C₁-C₁₂alkyl, unsubstituted or mono- to pentasubstituted C₃-C₁₂cycloalkyl, unsubstituted or mono- to pentasubstituted C₂-C₁₂alkenyl, unsubstituted or mono- to pentasubstituted C₂-C₁₂alkynyl, aryl or heterocyclyl, and

15 R₄ is mono- to pentasubstituted C₁-C₁₂alkyl, unsubstituted or mono- to pentasubstituted C₃-C₁₂cycloalkyl, unsubstituted or mono- to pentasubstituted C₂-C₁₂alkenyl, unsubstituted or mono- to pentasubstituted C₂-C₁₂alkynyl, unsubstituted and mono- to trisubstituted heterocyclyl, unsubstituted and mono- to pentasubstituted aryl, NH₂, NHC₁-C₁₂alkyl, N(C₁-C₁₂alkyl)₂, C₁-C₆alkyl-N(C₁-C₁₂alkyl)₂, -C₁-C₆alkyl-N⁺(C₁-C₁₂alkyl)₃, SO₂NH₂, SO₂NHC₆H₅, SO₂Phenyl, SO₂Benzyl, OH, -OC₁-C₁₂alkyl, -OC₁-C₁₂alkenyl or -OC₁-C₁₂alkynyl; or

20

(2) X is S, wherein

- 79 -

R₃ is hydrogen, unsubstituted or mono- to pentasubstituted C₁-C₁₂alkyl, unsubstituted or mono- to pentasubstituted C₃-C₁₂cycloalkyl, unsubstituted or mono- to pentasubstituted C₂-C₁₂alkenyl, unsubstituted or mono- to pentasubstituted C₂-C₁₂alkynyl; aryl or heterocyclyl, and

5 R₄ is hydrogen, unsubstituted or mono- to pentasubstituted C₁-C₁₂alkyl, unsubstituted or mono- to pentasubstituted C₃-C₁₂cycloalkyl, unsubstituted or mono- to pentasubstituted C₂-C₁₂alkenyl, unsubstituted or mono- to pentasubstituted C₂-C₁₂alkynyl, unsubstituted and mono- to trisubstituted heterocyclyl, unsubstituted and mono- to pentasubstituted aryl, NH₂,
 10 NHC₁-C₁₂alkyl, N(C₁-C₁₂alkyl)₂, SO₂NH₂, SO₂NHC₆H₅, SO₂Phenyl, SO₂Benzyl, OH or -OC₁-C₁₂alkyl; or

(3) X is O or S, wherein R₃ and R₄ together are a three- to seven-membered alkylene or a four- to seven-membered alkenylene bridge, in which a CH₂ group may be replaced by O, S, C=O or NR₆; or

15 (B) R₂ is OR₅ and X is O or S, wherein R₅ is C₁-C₁₂alkyl, mono- to pentasubstituted C₁-C₁₂alkyl, unsubstituted or mono- to pentasubstituted C₃-C₁₂cycloalkyl, unsubstituted or mono- to pentasubstituted C₂-C₁₂alkenyl, unsubstituted or mono- to pentasubstituted C₂-C₁₂alkynyl;

in which the substituents of the alkyl-, alkenyl-, alkynyl-, alkylene-, alkenylene-,
 20 heterocyclyl-, aryl- and cycloalkyl-radicals mentioned under R₃, R₄ and R₅ are selected from the group consisting of OH, halogen, halo-C₁-C₂alkyl, CN, SCN, NO₂, C₂-C₆alkynyl, C₃-C₈cycloalkyl which is unsubstituted or substituted by one to three methyl groups; norbornylenyl; C₃-C₈cycloalkenyl which is unsubstituted or substituted by one to three methyl groups; C₃-C₈halocycloalkyl, C₁-C₁₂alkoxy, C₁-C₁₂alkoxyC₁-C₁₂alkoxy, C₃-C₈cycloalkoxy, C₁-C₁₂alkylthio, C₃-C₈cycloalkylthio, C₁-C₁₂haloalkylthio, C₁-C₁₂alkylsulfanyl, C₃-
 25 C₈cycloalkylsulfanyl, C₁-C₁₂haloalkylsulfanyl, C₃-C₈halocycloalkylsulfanyl, C₁-C₁₂alkylsulfonyl, C₃-C₈cycloalkylsulfonyl, C₁-C₁₂haloalkylsulfonyl, C₃-C₈halocycloalkylsulfonyl, C₂-C₈alkenyl, C₂-C₈alkynyl, -N(R₆)₂, wherein the two R₆ are independent of each other; -C(=O)R₇, -O-C(=O)R₈, -NHC(=O)R₇, -S-C(=S)R₈, -P(=O)(OC₁-C₆alkyl)₂, -S(=O)₂R₁₁; -NH-S(=O)₂R₁₁,
 30 -OC(=O)-C₁-C₆alkyl-S(=O)₂R₁₁; aryl, benzyl, heterocyclyl, aryloxy, benzyloxy, heterocyclyloxy, arylthio, benzylthio, heterocyclylthio; and also aryl, heterocyclyl, aryloxy, benzyloxy, heterocyclyloxy, arylthio, benzylthio or heterocyclylthio which, depending on the possibilities of substitution on the ring, are mono- to pentasubstituted by substituents selected from the group consisting of OH, halogen, CN, NO₂, C₁-C₁₂alkyl, C₃-C₈cycloalkyl, C₁-C₁₂haloalkyl, C₁-C₁₂alkoxy, C₁-C₁₂haloalkoxy, C₁-C₁₂alkylthio, C₁-C₁₂haloalkylthio,

- 80 -

C₁-C₆alkoxy-C₁-C₆alkyl, dimethylamino-C₁-C₆alkoxy, C₂-C₈alkenyl, C₂-C₈alkynyl, phenoxy, phenyl-C₁-C₆alkyl, methylenedioxy, -C(=O)R₇, -O-C(=O)-R₈, -NH-C(=O)R₈, -N(R₁₀)₂, wherein the two R₁₀ are independent of each other; C₁-C₆alkylsulfinyl, C₃-C₈cycloalkylsulfinyl, C₁-C₆haloalkylsulfinyl, C₃-C₈halocycloalkylsulfinyl, C₁-C₆alkylsulfonyl, C₃-C₈cycloalkylsulfonyl, C₁-C₆haloalkylsulfonyl and C₃-C₈halocycloalkylsulfonyl;

R₆ is H, C₁-C₈alkyl, hydroxy-C₁-C₈alkyl, C₃-C₈cycloalkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, phenyl, benzyl, -C(=O)R₇, or -CH₂-C(=O)-R₇;

R₇ is H, OH, SH, -N(R₁₀)₂, wherein the two R₁₀ are independent of each other; C₁-C₂₄alkyl, C₂-C₁₂alkenyl, C₁-C₈hydroxyalkyl, C₁-C₁₂haloalkyl, C₁-C₁₂alkoxy, C₁-C₁₂haloalkoxy, C₁-C₆alkoxy-C₁-C₆alkyl, C₁-C₆alkoxy-C₁-C₆alkoxy, C₁-C₆alkoxy-C₁-C₆alkoxy-C₁-C₆alkyl, C₁-C₁₂alkylthio, C₂-C₈alkenyloxy, C₂-C₈alkynyloxy, NH-C₁-C₆alkyl-C(=O)R₉, -N(C₁-C₆alkyl)-C₁-C₆alkyl-C(=O)-R₉, -O-C₁-C₂alkyl-C(=O)-R₉, -C₁-C₆alkyl-S(=O)₂R₉; aryl, benzyl, heterocyclyl, aryloxy, benzyloxy, heterocyclyloxy; or aryl, benzyl, heterocyclyl, aryloxy, benzyloxy or heterocyclyloxy, which are unsubstituted or mono- to trisubstituted in the ring independently of one another by halogen, nitro, C₁-C₆alkyl, C₁-C₆alkoxy, C₁-C₆haloalkyl or C₁-C₆haloalkoxy;

R₈ is H, C₁-C₂₄alkyl, C₁-C₁₂haloalkyl, C₁-C₁₂hydroxyalkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₆alkoxy-C₁-C₆alkyl, N(R₁₀)₂, wherein the two R₁₀ are independent of each other; -C₁-C₆alkyl-C(=O)R₁₀, -C₁-C₆alkyl-S(=O)₂R₉, aryl, benzyl, heterocyclyl; or aryl, benzyl or heterocyclyl which, depending on the possibilities of substitution on the ring, are mono- to trisubstituted by substituents selected from the group consisting of OH, halogen, CN, NO₂, C₁-C₁₂alkyl, C₁-C₁₂haloalkyl, C₁-C₁₂alkoxy, C₁-C₁₂haloalkoxy, C₁-C₁₂alkylthio and C₁-C₁₂haloalkylthio;

R₉ is H, OH, C₁-C₂₄alkyl which is optionally substituted with OH, or -S(=O)₂-C₁-C₆alkyl; C₁-C₁₂alkenyl, C₁-C₁₂alkynyl, C₁-C₁₂alkoxy, C₁-C₆alkoxy-C₁-C₆alkyl, C₁-C₆alkoxy-C₁-C₆alkoxy, C₂-C₈alkenyloxy, aryl, aryloxy, benzyloxy, heterocyclyl, heterocyclyloxy or -N(R₁₀)₂, wherein the two R₁₀ are independent of each other;

R₁₀ is H, C₁-C₆alkyl, which is optionally substituted with one to five substituents selected from the group consisting of halogen, C₁-C₆alkoxy, hydroxy and cyano; C₁-C₈-cycloalkyl, aryl, benzyl, heterocyclyl; or aryl, benzyl or heterocyclyl, which, depending on the possibilities of substitution on the ring, are mono- to trisubstituted by substituents selected from the group consisting of OH, halogen, CN, NO₂, C₁-C₁₂alkyl, C₁-C₁₂haloalkyl, C₁-C₁₂alkoxy, C₁-C₁₂haloalkoxy, C₁-C₁₂alkylthio and C₁-C₁₂haloalkylthio;

- 81 -

or, if appropriate, an E/Z isomer, E/Z isomer mixture and/or tautomer thereof, in each case in free form or in salt form.

2. A pesticide composition which contains at least one compound of the formula (I) as described in claim 1 as active compound and at least one auxiliary.

5 3. A method for controlling pests wherein a composition as defined in claim 2 is applied to the pests or their habitat.

4. A process for preparing a composition as defined in claim 2 which contains at least one auxiliary, wherein the active compound is mixed intimately and/or ground with the auxiliary(s).

10 5. The use of a compound of the formula (I) as defined in claim 1 for preparing a composition as defined in claim 2.

6. The use of a composition as defined in claim 2 for controlling pests.

15 7. A method for protecting plant propagation material against damage by a pest, wherein the propagation material or the location where the propagation material is planted is treated with a composition as defined in claim 2.

8. Plant propagation material treated in accordance with the method defined in claim 7.